AMENDMENTS TO THE CLAIMS

1. (Currently Amended) A solid image pick-up element comprising:

a photoelectric converting portion;

a charge transmitting portion comprising a charge transmitting electrode that transmits a charge generated by the photoelectric converting portion; ~~and~~

a peripheral circuit portion connected to the charge transmitting portion~~.~~;

a wiring layer for the peripheral circuit portion; and

wherein a surface level of a field oxide film provided at the peripheral circuit portion and the charge transmitting portion to surround an effective image pick-up region of the photoelectric converting portion is to a degree the same as a surface level of the photoelectric converting portion~~.~~,

the charge transmitting electrode includes a first electrode, and

a surface level of the first electrode is substantially the same as a surface level of the wiring layer.

2. (Currently Amended) The solid image pick-up element according to Claim 1,

wherein the charge transmitting electrode has a single layer electrode structure comprising a second~~first~~ electrode and said~~a~~ first~~second~~ electrode formed via an insulting film between electrodes covering a side wall of the second~~first~~ electrode.

3. (Original) The solid image pick-up element according to Claim 2,

wherein the first electrode comprises a first layer conductive film, and the second electrode comprises a second layer conductive film.

4. (Previously Presented) The solid image pick-up element according to Claim 1,

wherein the field oxide film is a film formed by selective oxidation (LOCOS).

5. (Withdrawn) The solid image pick-up element according to Claim 4,

wherein the field oxide film is formed in a trench.

6. (Withdrawn) The solid image pick-up element according to Claim 1,
wherein the field oxide film is an insulating film filled in a trench.

7. (Withdrawn) The solid image pick-up element according to Claim 3,
wherein the first layer conductive film is provided with a dummy pattern on the field oxide film.

8. (Withdrawn) A method of producing a solid image pick-up element which comprises a photoelectric converting portion, a charge transmitting portion including a charge transmitting electrode having a single layer electrode structure for transmitting a charge generated by the photoelectric converting portion, and a peripheral circuit portion connected to the charge transmitting portion, the method comprising:

a step of flattening a total of a surface of a semiconductor substrate after forming a field oxide film on the surface of the semiconductor substrate and before forming the charge transmitting electrode.

9. (Withdrawn) The method of producing a solid image pick-up element according to Claim 8, further comprising:

a step of forming a trench at a region of forming the field oxide film provided at the peripheral circuit portion and the charge transmitting portion to surround an effective image pick-up region of the photoelectric converting portion;

a step of forming the field oxide film in the trench;

a step of flattening the surface of the semiconductor substrate formed with the field oxide film; and

a step of forming element portions comprising the charge transmitting electrode, the photoelectric converting portion and the peripheral circuit portion on the surface of the semiconductor substrate.

10. (Withdrawn) The method of producing a solid image pick-up element according to Claim 9, wherein the step of forming the field oxide film comprises a step of selective oxidation (LOCOS).

11. (Withdrawn) The method of producing a solid image pick-up element according to Claim 9, wherein the step of forming the field oxide film comprises a step of filling an insulting film to the trench by a CVD method.

12. (Withdrawn) The method of producing a solid image pick-up element according to Claim 9,

wherein the step of flattening the surface of the semiconductor substrate includes:

a step of coating a resist by a spin coating method on the surface of the semiconductor substrate; and

a step of flattening the surface of the semiconductor substrate by a resist etch back method.

13. (Withdrawn) The method of producing a solid image pick-up element according to Claim 9,

wherein the step of flattening the surface of the semiconductor substrate comprises:

a step of flattening the surface of the semiconductor substrate by a CMP (chemical mechanical polishing) method.

14. (Withdrawn) The method of producing a solid image pick-up element according to Claim 9,

wherein the step of forming the element portions comprises:

a step of forming a pattern of a first layer conductive film constituting a first electrode, the photoelectric converting portion and a first layer wiring for the peripheral circuit portion on the flattened surface of the semiconductor substrate;

a step of forming an insulating film between electrodes at at least a side wall of the first electrode;

a step of forming a second layer conductive film constituting a second electrode on the surface of the semiconductor substrate formed with the first electrode and the insulting film between electrodes; and

a step of flattening the second layer conductive film.

15. (Withdrawn) The method of producing a solid image pick-up element according to Claim 14,

wherein the step of flattening the second layer conductive film includes:

a step of coating a resist at an upper layer of the second layer conductive film by a spin coating method; and

a step of flattening the second layer conductive film by a resist etch back method.

16. (Withdrawn) The method of producing a solid image pick-up element according to Claim 15,

wherein the step of forming the pattern of the first layer conductive film comprises:

a step of forming the pattern including a dummy pattern such that a surface level of the resist does not become to be equal to or smaller than a predetermined value on the semiconductor substrate.

17. (Withdrawn) The method of producing a solid image pick-up element according to Claim 14,

wherein the step of flattening the second layer conductive film includes:

a step of flattening the second layer conductive film by a CMP (chemical mechanical polishing) method.

18. (Withdrawn) The method of producing a solid image pick-up element according to Claim 17,

wherein the step of forming the pattern of the first layer conductive film includes:

a step of forming the pattern including a dummy pattern such that a surface level of the second layer conductive film does not become equal to or smaller than a predetermined value on the semiconductor substrate.

19. (Withdrawn) The method of producing a solid image pick-up element according to Claim 15, further comprising

a step of forming a stopper layer constituting an etching stopper on the surface of the first electrode prior to the step of forming the second layer conductive film,

wherein the flattening step is a step for executing resist etch back by constituting a stopper by the stopper layer.

20. (Withdrawn) The method of producing a solid image pick-up element according to Claim 17, further comprising

a step of forming a stopper layer constituting a CMP stopper on the surface of the first electrode prior to the step of forming the second layer conductive film;

wherein the flattening step is a step of executing CMP by constituting a stopper by the stopper layer.

21. (New) The solid image pick-up element according to claim 1, further comprising;

a semiconductor substrate; and

a gate oxide film that is formed between the charge transmitting electrode and the semiconductor substrate,

wherein the gate oxide film is formed between the wiring layer for the peripheral circuit portion and the semiconductor substrate.